



**DATRON DYNAMICS, INC.**  
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## Application Notes

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**Part:**..... Beveled Label  
**Material:** ..... .075" Aluminum  
**Machine Used:**..... M5 - 4750  
**Features Utilized:** ..... High Frequency Spindle & Tool Length Sensor  
**Software Used:** ..... PrimCam  
**Total Cycle Time:** ..... Varies (see machining details)



### Machining Details:

Test 1: 35,000 rpm at 40 i.p.m. (1 pass)  
Small bevel: 20 seconds / Larger Bevel: 33 seconds

Test 2: 35,000 rpm at 80 i.p.m. (2 passes)  
Small bevel: 26 seconds / Larger Bevel: 35 seconds

Test 3: 25,000 rpm at 20 i.p.m. (1 pass)  
Small bevel: 36 seconds / Larger bevel: 60 seconds

### Application Summary:

Based on the required tooling of  $\frac{1}{4}$ ", the M5 Datron machining system offers numerous advantages over traditional machining methods. The 60,000 RPM spindle offers a reduced cycle time compared to traditional machining centers. Also the mist coolant minimized burring and required no additional degreasing operations. Further developments in customized tooling should also yield better cycle times along with improved surface finishes. Our parent company, Datron Electronic located in Germany, has assisted us in specialty tooling applications like this in the past, with great success. Within the standard 40" x 30" working volume of the M5, numerous parts could be fixtured in such a method, that the machine continually cycles with no interrupts. Datron Dynamics would be able to offer a turn-key solution complete with fixturing in place, so that upon the delivery of the equipment, GM Nameplate would be in production immediately. Datron Dynamics has extensive experience in fully automated systems, which have substantially reduced operator interfacing in most applications. The compact footprint, machining capacity, efficient power requirements, and transportability of the equipment, make the M5 high-speed machining system a versatile solution for dynamic industrial environments.